

THURSDAY, DECEMBER 29, 1881

SUICIDE

Suicide; an Essay on Comparative Moral Statistics.

By Henry Morselli, M.D., Professor of Psychological Medicine in Royal University, Turin, &c. International Science Series, Vol. xxxvi. (London: C. Kegan Paul and Co., 1881.)

THIS work enters the International Science Series as an abridged translation of the author's original book, which was written in Italian. As its title implies, it is throughout statistical, and as no pains have been spared in collecting statistics from every available quarter, the results are the most comprehensive and complete that can be obtained with reference to the subject of which the essay treats. These results are interesting, not only because of the light which they shed upon a somewhat sombre topic, but also because they show what a powerful and trustworthy instrument of inquiry we possess in the statistical method, even when applied to what at first sight might appear the most complex and variable of causes leading to the most uncertain or least calculable of effects. For assuredly the most striking feature common to all the multitudinous tables which Dr. Morselli presents to us is the uniformity with which, under a given set of conditions and over a sufficiently wide area of observation, a certain average number of suicides will occur.

Chapter I. is on "The Increase and Regularity of Suicide in Civilised Countries," and it shows that, to use the words of its opening sentence, "from statistics collected up to this time is demonstrated this most painful fact, that suicide has increased from the beginning of the century, and goes on continually increasing in almost all the civilised countries of Europe and of the New World." Thus, for instance, in France from 1827 to 1852 there was a continued increase in the annual number of suicides, from 48.0 to 82.6 per million of inhabitants; and in Italy from 1864 to 1877 there was a similarly gradual rise from 29.2 to 40.6.

Of the "influences which act upon suicide," the first that are considered are the "cosmico-natural." Concerning climate it is shown that "the South of Europe gives the minimum proportion, while that rises by degrees as the centre is approached, reaching a maximum at 50° of latitude, and again gradually declining northwards; "whence it appears that the zone in which are situated the countries where suicide is most frequent is the *temperate*, as might be anticipated from the historical fact of the favourable development of ancient and modern civilisation in the regions furthest removed from the extreme climates." As shown graphically by a shaded map, "the line of suicide crosses the European continent from the north-east to the south-west."

The distribution of suicide in each of the chief countries of Europe is then given. Of the statistics on this head we may quote those which have reference to our own country.

"In Great Britain the average, lowest in Ireland, higher in Scotland and Wales, becomes still more elevated in the North of England, and it acquires its maximum in the South; nor can it be said that this is caused by the

metropolis, as it was in France by the irradiation of Paris, because London, on the contrary, gives a smaller proportion of suicides than some of the South and South-west counties, and especially Cumberland. We give in Table VII. the averages of the five years 1872-76 calculated on the population of the census of 1871.

TABLE VII.—*Distribution of Suicide in England-Wales (1872-76)*

DIVISIONS AND COUNTIES.	Annual average.	In the million.	DIVISIONS AND COUNTIES.	Annual average.	In the million.
I. LONDON.			VI. CENTRAL-WEST.		
Middlesex	199.4	88.6	22. Gloucester	29.0	59.5
Surrey	63.2	85.1	23. Hereford	8.0	66.1
Kent	16.4	72.6	24. Shropshire	15.8	59.1
II. SOUTH-EAST.			25. Stafford	43.0	49.1
1. Surrey	33.0	90.3	26. Worcester	21.2	62.0
2. Kent	55.0	87.4	27. Warwick	58.2	92.3
3. Sussex	47.0	111.6	VII. CENTRAL NORTH.		
4. Hampshire	32.8	62.3	28. Leicestershire	23.0	83.2
5. Berkshire	17.2	76.0	29. Rut' and	3.6	153.0
III. CENTRAL-SOUTH.			30. Lincoln	29.4	68.6
6. Middlesex	26.2	98.9	31. Nottingham	29.0	81.6
7. Hertford	10.4	53.4	32. Derbyshire	27.4	84.3
8. Buckingham	9.6	61.9	VIII. NORTH-WEST.		
9. Oxford	11.4	63.9	33. Cheshire	38.0	70.3
10. Northampton	18.0	72.5	34. Lancashire	197.4	69.2
11. Huntingdon	3.2	50.5	IX. YORK.		
12. Bedford	5.8	38.2	35. West-Riding	133.4	71.4
13. Cambridge	12.2	63.5	36. East-Riding	26.4	86.1
IV. EAST.			37. North-Riding	16.4	54.2
14. Essex	27.6	62.6	X. NORTH.		
15. Suffolk	22.6	65.0	38. Durham	37.2	53.6
16. Norfolk	33.2	77.0	39. Northumberland	27.2	70.3
V. SOUTH WEST.			40. Cumberland	21.2	96.2
17. Wiltshire	11.6	47.4	41. Westmoreland	3.8	58.3
18. Dorsetshire	0.6	50.7	XI. WELSH.		
19. Devonshire	38.0	62.6	42. Monmouthshire	10.2	46.4
20. Cornwall	13.8	38.5	43. South Wales	33.6	43.8
21. Somerset	32.0	66.3	44. North Wales	16.0	36.7

Why Cumberland, Sussex, Surrey, Warwick, and most of all Rutland, should show such pre-eminence is unaccountable.

Other things equal, the most favourable localities for suicide are flat plains and the courses of large rivers, while mountainous districts invariably yield the smallest percentage. Again, "the regions where suicide predominates are all those formed by alluvial deposits of the more recent epochs; regions, that is to say, which up to the Tertiary period had remained covered by the sea, and which, emerging only in later times, assisted the development of the more recent flora and fauna."

Concerning the influence of seasons, it is shown that—

"The transition period between spring and summer, and especially the month of June, exercises the most positive influence on suicidal tendency, whilst that of winter, particularly of December, would be negative. It is strange that for long an opposite opinion was held; it was maintained that suicide was more frequent in damp, cloudy, and dark weather, such as helps the development of the melancholy passions."

On this subject Dr. Morselli observes that the regular distribution of voluntary deaths in the course of the year, which, taking the chief countries of Europe, he graphically represents by means of curves, "is in evident relation with that of madness. All alienists are agreed as to the greater frequency of mental alienation in the summer season, and this law is confirmed by all the statistics of the asylums for the insane." But—

"It is to be noted that suicide and madness are not influenced so much by the intense heat of the advanced summer season as by the early spring and summer, which seize upon the organism not yet acclimatised and still under the influence of the cold season. And this also applies to the first cold weather, as may be seen in the proportional figures of our statistical tables, perhaps better still in the second elevation, which all the curves, as shown by us, offer in the autumn months of October and November, when the change from the warm to the cold season is more severely felt by the human constitution, and especially by the nervous system."

It is a curious fact that everywhere suicides are committed with greater frequency during the first third of any given month than during the second third, and during the second third than during the remaining third. Moreover of the first third, the first two days yield the largest proportional number. "From whence this fact proceeds is not clear, unless it be that in the first days of each month debauchery, dissipation, orgies, especially in large cities, are more numerous."

Again, among men the first days of the week predominate in respect of influences leading to suicide over the later—the order standing Tuesday, Thursday, Monday, Wednesday, Friday, Sunday, Saturday. Among women, however, an inverse ratio obtains—the order here being Sunday, Friday, Thursday, Wednesday, Tuesday, Saturday, Monday. Doubtless the reason of this among men is that Saturday is usually pay-day, and "thus a day of joy, of material well-being, of moral quiet." This lasts through Sunday, but with Monday men's labour begins, with the after effects of satiated gluttony, inebriety, &c. On the other hand, "the high proportion [of suicides] among women on Sunday is of the greatest psychological interest."

As regards the time of day, the hourly distribution of suicides—

"Is parallel to activity in business, to occupations and work, in short with the noise which characterises the life of modern society, and not with silence, quiet, and isolation. Petit and De Boismont then justly note that the influence of the diurnal hours is shown also in the predominance of those months which have the longest days, and are precisely, as we see, June, May, and July. Thus all the influences which we are studying join together and mingle in one single and efficient synthesis, that is to say, the dependence of man upon nature."

One of the most interesting chapters in the book is that on "Ethnic Influences," a general summary of which is given in the appended table.

On this it is remarked :—

"The low position in point of numbers held by the English peoples, with regard to suicides, in comparison with the Germanic, whilst the first place in the civilised world as regards power and riches belongs to them without dispute, is astonishing; it is not modern Rome, it is not England, which gives the greater number of suicides."

And the divergence between England and the countries where the Celtic race remains most pure (Scotland, Ireland, Wales), proves "the influence of the Germanic element infiltrated"—the Celtic races being least addicted to suicide, and the Germanic most so.

Another very interesting section is that on religious influences. The Jews display "an habitual resistance to suicide, though the same cannot be said with regard to madness." Again, "the Catholic nations, Italy, Spain,

TABLE XIII.—*Synopsis of the Ethnological differences of Suicide*

RACES AND STOCKS.		COUNTRIES.	Popula- tion.	Annual number of suicides.	Per million.				
					General average.				
GERMANIC PEOPLES	Scandi- navia.	Denmark (1866-75)	1 784,741	468	268	127.8			
		Norway (1866-73)	1,741,621	131	745				
		Sweden propr. and Gothia (1866-75)	3 536,799	297	84				
	Germans of the North. (Low- German).	Mecklenburg (1871-75)	553,754	95	167	150			
		Lauenburg (1858-65)	49,704	8	156				
		Oldenburg (1865-70)	315 995	62	198				
		Prussia and its conquests (1871-75)	25,772,562	3342	133				
		Hamburg (1873-77)	388,618	113	301				
		Bremen (1875-76)	141,848	36	245				
		Ducal Hesse (1871)	852,843	101	160				
		Bavaria (1871-76)	5,023,904	450	90				
		Baden (1871-75)	1,806,531	231	157				
		Württemberg (1872-76)	1,881,505	294	162				
		Kingdom of Saxony (1871-76)	2,763,342	752	299				
	Germans of the South.	Saxe-Altenburg (1858-65)	141,839	(42)	303	165			
		Saxe-Meiningen (1860-61)	172,341	(37)	264				
		Salzburg (1873-77)	153,159	19	120				
		Upper Austria (1873-77)	736,557	81	110				
		Lower Austria (1873-77)	1,990,708	539	254				
		Styria (1873-77)	1,137,990	115	94				
		Carinthia (1873-77)	337,694	34	92				
		Alsace-Lorraine (1856-60)	1,531,804	230	97				
		Cantons — German-Swiss (1876)	1,357,424	224	165				
		Anglo- Saxon.	England (excluding Wales) (1872-76)	21 290,596	1538		72	70	
United States of America	38,000,000		—	(32)					
South Australian Colonies (1872-76)	208,950		19	90					
Netherlands (1869-72)	3,618,016		145	35					
Flemings.	Flemish Prov. of Belgium		1,342,297	98	74	50			
	Circ. d'Aurich of Hanov. (1871)	195,394	—	(100)					
	Wales (1872-76)	1,421,670	60	52	30				
	Scotland	3,360,000	—	35					
	Britain (1872-76)	2,947,348	221	75					
Celts.	Ireland (1831-41)	7,800,000	79	10		150			
	France (1871-75)	36,102,291	5256	150					
	French Prov. of Belgium (1858-60)	3,433,000	119	35	116				
	French-Swiss Cantons (1876) Northern Italy (Cisalp.) (1864-76)	1,401,420	284	200					
	Peninsular and Lower Italy Spain (1866-70)	11,813,515	500	46					
CELTO-ROMANS (Latins?)	Italian-Swiss Cantons	14,248,157	381	26		27			
	Spain (1866-70)	16,302,625	—	17					
	Transylvania (1873-77)	211,401	21	90	(50.1)				
	Roumania	2,115,124	—	80					
	Russia (1875)	4,000,000	—	(25)					
	Slavs of the North- West.	Russia (1875)	69,354,541	1771		30	42		
		Bohemia (1873-77)	5,140,544	863		158			
		Moravia (1873-77)	2,017,274	289	136				
		Galicja-Buckovina (1873-77)	5,958,083	589	98				
		Carniola (1873-77)	466,334	22	46				
		Slavs of the South.	Croatia and Slavonia (1864-65)	876,009	—	30		30	
			Dalmatia (1860-61)	456,961	—	14			
			Military Frontiers (1860-61) Hungary (1864-65)	593,232	—	31			
			Finland (1869-76)	9,900,785	—	52			52
			Norrlund (1861-70)	1,732,621	56	31			
Magyars Finns and Letts. Slavo- Mongols.	Russian Baltic Prov.	529,128	31	62	40				
	South-East Russia or Caspia	3,637,000	—	(47)					
	—	—	—	(51)		(51)			

and Portugal, stand on the last step of the scale of suicide, whilst those exclusively or mostly Protestant, take the first grade; it suffices to cite Saxony, Denmark, Scandinavia, and Prussia. In countries of mixed religions, the inclination towards suicide diminishes in direct ratio to the predominance of Catholicism . . . the most frequent order in which the various religions follow each other is thus: *Protestants, Catholics, Jews*; and the next in order of frequency come *Protestants, Jews, Catholics*."

In this connection the following is perhaps worth quoting :—

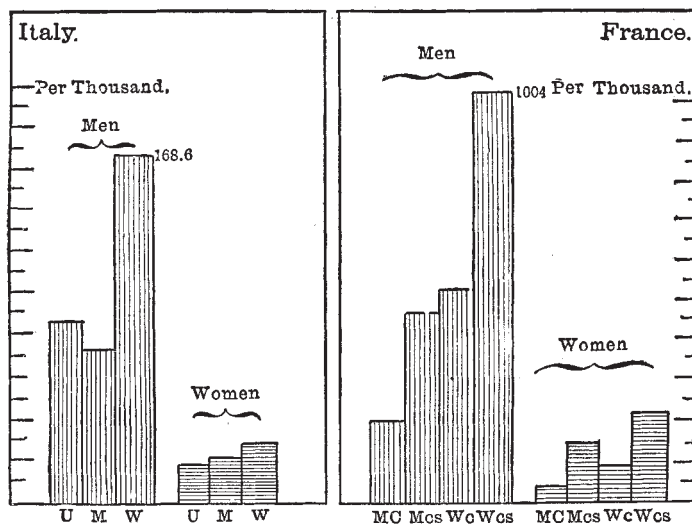
"The very high average of suicides among Protestants is another fact too general to escape being ascribed to

the influence of religion. Protestantism, denying all materialism in external worship and encouraging free inquiry into dogmas and creeds, is an eminently mystic religion, tending to develop the reflective powers of the mind and to exaggerate the inward struggles of the conscience. This exercise of the thinking organs which, when they are weak by nature, is always damaging, renders them yet more sensible and susceptible of morbid impressions. Protestantism in the German States further exercises this exciting influence on the cerebral functions in yet another manner; it originated those philosophical systems which are based on the naturalistic conception of human existence, and put forward the view that the life of the individual is but a simple function of a great whole. These philosophical ideas are harmless enough to strong minds and those stored with a fit provision of scientific culture, but in the democratic atmosphere of our times the heart is not educated *pari passu*. The religious apathy with which the present generation is afflicted does not arise from a reasoned inquiry into the laws of nature or a scientific appreciation of its phenomena; it is not in short a deep conviction of the mind, but springs from a physical inertia and from the little hold obtained by any ideas but such as are directed to material improvement and the gratification of ambition.

To our mind therefore the great number of suicides is to be attributed to the state of compromise which the human mind occupies at the present time between the metaphysical and the positivist phase of civilisation, and as this transition is more active in countries of marked mystic and metaphysical tendencies, such as is the case with Protestantism, it is natural that in them suicide should have the greatest number of victims."

Another feature of interest which a comparison of the statistics of all countries brings out is that "it is those countries which possess a higher standard of general culture which furnish the larger contingent of voluntary deaths,"—a fact which finds its curious expression in the following:—"The scale of these countries according to suicide is nearly the same as that of the periodical press." It is likewise higher in towns than amongst the more scattered inhabitants of the country.

Concerning sex, "in every country the proportion is one woman to three or four men, as in crime it is also one to four or five"—a proportion which the tables show to be everywhere maintained with wonderful constancy, save in a few cases, the most remarkable of which is that of



Spain, where "one woman commits suicide against only two and a half men." This strong tendency towards suicide shown by the women of Spain our author attributes "to the force of their passions, which brings them nearer to the male sex."

In both sexes the suicidal tendency augments in direct ratio with age up to the fifth decennial period for men, and up to the fourth for women, beyond which they diminish with as much uniformity. In England, however, the number of young women who commit suicide between fifteen and twenty years is so large as to exceed by more than a tenth the number of men. This "precocity of suicide in English women lasts up to the thirtieth year, when the proportional relation between the two sexes becomes nearly equal to the average. The masculine excess also seems to diminish in extreme old age, so that at above seventy the two sexes tend to draw near again." But—

"The diminution in the last period of life is much more irregular than in all the other conditions: strongest in Würtemberg, less so in Sweden, Belgium, and Eng-

land; very weak in France, Bavaria, and Italy; failing almost entirely in Denmark (1835-44), Saxony, Austria, and perhaps Prussia. This diminution of suicide amongst the old belongs to the weakening of their character and to that want of energy natural to the last period of existence, in which man returns almost to childhood, and not having a long future before him, and even if overtaken by misfortune, he prefers to await the natural end of his days. Moreover, the religious sentiment awakens and revives in old age, acting as a curb to the passionate emotions and as a supreme comfort in adversity."

The remarkable effects of marriage, widowhood, and presence or absence of children may be best appreciated by transcribing one of Dr. Morselli's diagrams, where U. means unmarried, M. married, W. widowed, MC. married with children, Mcs. married childless, Wc. widowed with children, and Wcs. widowed childless.

A number of tables are given showing the effects on suicide of different occupations. "First of all are the literary, scientific, journalists, engineers, geometricians, all those, in short, who make the greatest use of their brain power. Next come the military, of whose very high

inclination towards suicide we shall speak in the following section; and then the true professionals, tradespeople, and all those reckoned in the vagrant professions." The statistics with regard to the military are remarkable. Thus in Prussia the average suicide over the whole male population is 394 per million, while in the army it rises to 600 or 620. In Austria the proportion is still higher, viz. 866 per million as against 122 of the civil population, and in the Belgian army the case is nearly as bad. In the English army from 1862-71 the suicidal tendency was more than triple that of the male civilian population. "This tendency, moreover, augmented as time advanced; from 1862-71 it grew from 278 per million to 400, and even reached 569 in 1869. The tendency increases with the sending away the troops from Europe, so that in the kingdom (*at home*) the number is 339 per million, but in the English possessions in India it rises to 468." Of the different sections of the British army members of the cavalry are most addicted to suicide (in one year the percentage among the dragoons being as high as 785 per million), next the artillery, then the infantry, foot-guards, engineers, and lastly the household cavalry.

Analysis of the motives which lead to suicide shows this as a general result:—"In man the manifestation of personal interest rules in [almost] every case, and as only a fourth or fifth of the suicides are committed by women, the already small proportion of those which are due to noble and generous motives becomes still more attenuated."

Concerning the methods and places chosen by suicides,

"Each country certainly has its peculiar predilections, but in the aggregate of the peoples by whom suicide is practised, the rope appears to be chosen before every other instrument, and immediately after that water (both giving 5-10ths to 8-10ths of cases); firearms follow; then those arms which cut or stab; falling from a height is preferred to charcoal and poison; and lastly come all the other means."

Hanging stands in inverse ratio to drowning. For in Italy and other countries where hanging is most rarely resorted to, drowning is most common, while in Russia, where hanging is the favourite mode (four-fifths of all the suicides) drowning is very rare (hardly 6.9 per cent.). Firearms are preferred in the South of Europe and by the military everywhere, while in England poison and throatcutting are most favoured. It is curious that "there is a constant difference between the sexes in falls from heights and crushing under railway trains, the former being proportionally more frequent among women, the latter, on the contrary, much more so amongst men." There are other "sexual divergences" of the same kind, and as showing the combined influence of sex and age we may quote one other passage:—

"Males under 15 years of age choose hanging (86 per cent.), and women choose drowning (71 per cent.); in the ages between 15 and 20 the same predilection of the two sexes continues, but it lessens (hanging amongst males is 72 per cent.; drowning among women 65), and it grows still less between the ages of 20 and 30. With the diminution of the tendency towards hanging, that towards drowning increases amongst the men, the greatest number of deaths by this means falling between the ages of 40 and 50; but in advanced age the old people return to a preference for hanging, even more than children (91 per cent.)."

The book concludes with a short "Synthesis," which leads to the proposition that "Suicide is an effect of the struggle for existence and of human selection [*i.e.* natural selection operating in the human species], which works according to the laws of evolution among civilised people." From the present sketch it will be seen that the work as a whole contains many facts of interest to sociologists, although to the rest of the world its somewhat repulsive details will appear useful only as showing the practically emphatic answer which sundry classes of the community respectively give to the question "Is life worth living?"

GEORGE J. ROMANES

OUR BOOK SHELF

Catalogue of the Phanogamous and Vascular Cryptogamous Plants of Michigan—Indigenous, Naturalised and Adventive. By Chas. F. Wheeler and Erwin F. Smith. (Lansing: George and Co., 1881.)

THIS excellent contribution to the flora of the United States has been compiled at the suggestion of the State Horticultural Society of Michigan. It is prefaced with a list of the various catalogues, from that by Dr. Jno. Wright, embracing 850 species, and published in 1839, to that of Dr. Palmer in 1877. With reference to its flora the Peninsula may be roughly divided into two great divisions—the hard wood and the soft wood-lands—one representing the Appalachian flora, the other the Canadian. The hard-wood country lies south of latitude 43°, and consists of very fertile sand, clay, or loam, mostly cleared of the original forest and largely cultivated. The upper Peninsula has a much colder climate than that of the lower Peninsula, and its flora is in many respects decidedly northern. Pines, fir, cedar, larch, elms, poplars, maples, and birch, are among the principal trees; the proximity of the great lakes exerts a marked influence on equalising the temperature, and the effects thereof are well seen. Trees like *Liriodendron tulipifera*, *Cercis canadensis*, *Gleditsia triacanthos*, *Cornus florida*, and *Morus rubra*, which belong to Ohio and Central Illinois, have crept northward, favoured by the mild influence of the lake winds through the central and western part of the Lower Peninsula often beyond the middle. The flora as detailed shows 1634 species. The composites claim the larger number of species—182—about one-ninth of all. Sedges follow with 176 species; Grasses, 139; Rosaceæ, 61; Leguminosæ, 55; Scrophulariaceæ, 46; Umbelliferae, 27. Of the 165 species of trees and shrubs about twenty are valuable for their timber. About twenty species of woody and herbaceous native climbers are frequent, and some seem worthy of cultivation. The arrangement followed is that of the fifth edition of "Gray's Manual," and a coloured map of Michigan is annexed.

LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

Pendulum Observations in London

THE reference by the President of the Royal Society in his recent annual address to the subject of "contemplated pendulum operations permits me to assume that enough interest exists in those operations to render the offer which I now wish, with your kind assistance, to make, not altogether inopportune. I am now engaged in swinging pendulums, in London, under conditions